

FOOD IRRADIATION

What's It All About?



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What is food irradiation?

Food irradiation is a process in which food is exposed to radiation, either from gamma rays, x-rays or electrons. The radiation passes through the food to destroy harmful bacteria or delay the ripening of fruits and vegetables. Food irradiation is one of several ways food can be processed, like canning, freezing or drying.

Who determines what foods can be irradiated?

The Food and Drug Administration (FDA) regulates food irradiation under the 1958 Food Additive Amendment to the Food, Drug and Cosmetic Act. Under this law, the safety of any new food additive must be proven before its use can be approved. Irradiation is considered a food additive.



The Food and Drug Administration has approved the following foods for irradiation:

- Wheat — to control insects
- Potatoes — to prevent sprouting
- Spices and Seasonings — to kill insects
- Poultry — to control disease-causing microorganisms like *Salmonella*
- Beef — to kill dangerous bacteria like *E. coli 0157:H7*
- Seafood — to prevent food poisoning and extend shelf life
- Fruits and Vegetables — to delay ripening
- Pork — to destroy harmful parasites such as *Trichina*

Does irradiation make food radioactive?

No. Food undergoing irradiation does not become radioactive, just as your luggage does not become radioactive after passing through an airport x-ray scanner, or as your teeth do not become radioactive after a dental x-ray. That's because the energy of the radiation is too low to

Are irradiated foods still nutritious?

induce radioactivity.

Yes. In virtually all cases, food preserved with food irradiation is nutritionally equal or superior to those preserved by other methods,

How is food irradiated?



such as cooking, freezing and canning.

Food is irradiated at specially designed facilities. Food is placed on a conveyor which passes into a sealed chamber. Inside the chamber, the food is exposed to an energy source, or irradiated. The

How do I know if my food has been irradiated?

conveyor then carries the food out of the chamber.

Irradiated food is required to be clearly marked with an international symbol for easy identification by consumers. This symbol is called the radura. The phrase “treated with radiation” or “treated by radiation” must accompany the radura.

Does eating irradiated food present health risks?

No. Food irradiation has been studied by numerous scientists and organizations in the United States and around the world for decades. The process has been approved in nearly 40 countries for more than 40 products. In fact, for many years U.S. astronauts and patients with compromised immune systems have eaten food that has been irradiated.

If irradiation is safe, why don't I see irradiated food products in my local grocery store?

There are stores around the country that offer irradiated products and others that have test marketed such products to gauge consumer acceptance. In general, irradiated products have been well received, often preferred over their non-irradiated counterparts.

Widespread availability of irradiated foods depends on several factors, including consumer acceptance. Food contamination-related illnesses have sparked public interest in prevention methods, including food irradiation. It is likely that this, combined with more public information about food irradiation, will spur demand for irradiated products.

Does IEMA make sure irradiation facilities are safe?



Yes. Just like other facilities in Illinois that use radioactive materials, the Illinois Emergency Management Agency (IEMA)-Division of Nuclear Safety regulates irradiation facilities. All facilities must meet the strict requirements in their licenses which are designed to ensure worker and public safety. IEMA conducts periodic inspections of these facilities to ensure that they meet all their license requirements.

Currently, the primary food items irradiated in Illinois are various spices and certain fruits. Irradiation facilities are mainly used for sterilization of medical equipment and supplies.